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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,938	10/21/2003	Kristof Mattheeuws	21334-1269	4002

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EXAMINER

NGUYEN, PHUONGCHI T

ART UNIT PAPER NUMBER

2833

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,938

Applicant(s)

MATTHEEUWS ET AL.

Examiner

Phuongchi Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The correct drawing of December 15, 2003 for Fig.1 has been accepted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US6488319B2) in view of Hwang (US6142812).

In regarding to claim 1, Jones discloses the latching fingers (25, 29, 31, 33) being of at least a first type (of 33) and a second type (of 31), the first type (of 33) having a different length than the second type (of 31) (figures 4 and 6). However, Jones lacks the locking ring having latching fingers that engage the groove of the second connector. Hwang teaches an electrical connector, comprising a first connector member (101) having a first contact (7); a second connector member (102) having a groove (9a) and a second contact (6) for electrical connection with the first contact (7), and locking ring (3) disposed on the first connector member (101), the locking ring (3) having latching fingers (forming by cutting portion 3a) that engage the groove (9a) when the first connector member (101) and the second connector member (102) are mated to lock the first connector member (101) to the second connector member (102) (figures 3 and 5). It would have been obvious to one having ordinary skill at the time the invention was made to provide the latching fingers of Jones with the first and second type lengths on the electrical connector as taught by Hwang for increasing the connection between two electrical connectors by the locking ring.

In regarding to claim 2, Jones discloses the connector wherein the first type (of 33) formed at a different angle with respect to a plane (23) (or axis 35) of the locking ring (19) than the second type (of 31) (figure 6).

In regarding to claim 3, Jones discloses the connector wherein the second type (of 31) has a shorter length (of finger 31) and a smaller angle (forming by axis 35 and finger 31) than the first type (of 33).

In regarding to claim 4, Jones discloses the connector further comprising a third type (of 29) of the latching fingers (25, 29, 31, 33), the third type (of 29) has a shorter length (of finger 29) and a smaller angle (forming by axis 35 and finger 29) than the second type (of 31).

In regarding to claim 5, Jones discloses the connector wherein the latching fingers (25, 29, 31, 33) extend from an inner side of the locking ring (19) toward a lower side of the plane (23) of the locking ring (19) (figures 3 and 6).

In regarding to claim 6, Jones discloses the connector wherein the length of the first type (of 33) and the length of the second type (of 31) vary by more than three percent of the length (it is shown in figure 6).

In regarding to claim 7, Jones discloses the invention, but lacks an abutment surface of the first connector. However, Hwang teaches the connector wherein the first connector member (101) includes an abutment surface (adjacent 2) and the latching fingers (forming by cutting portion 3a) hold the second connector member (102) against the abutment surface (adjacent 2) (figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to provide an abutment surface of the first connector of Jones to engage the second connector against the abutment surface as taught by Hwang for increasing the good connection between the locking ring and two electrical connectors.

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In regarding to claim 8, Jones discloses the invention, but lacks an unlocking member. However, Hwang teaches the connector comprising an unlocking member (8) formed to slide adjacent to a surface of the first connector member (101) and formed to engage the latching members (3) to release the latching members (3) from the groove (9a) (column 4, lines 24-32). It would have been obvious to one having ordinary skill at the time the invention was made to provide on the connector of Jones an unlocking member as taught by Hwang for ease releasing the first connector.

In regarding to claim 9, Jones discloses the connector wherein the latching fingers (25, 29, 31, 33) are positioned around an annular surface (of 23) of the locking member (19), the first type (of 33) of the latching fingers (25, 29, 31, 33) are arranged directly across from each other on the annular surface (of 23) and the second type (of 31) of the latching fingers (25, 29, 31, 33) are arranged directly across from each other on the annular surface (of 23) (figures 5 and 6).

Claims 10; 11; 12; 13; 14; 15 are rejected for the same reason of claims 1 and 2; 3 and 4; 5, 7, 8, 9, respectively.

In regarding to claim 16, Jones further discloses the first type (of 33) is a first distance from an annular surface (of 23) to an engaging end surface (of mating edge 20) of the connector (18), the second type (of 31) is a second distance from an annular surface (of 23) to an engaging end surface (of mating pin 20) of the connector (18) (figure 2), Jones lacks an abutment surface of the first connector and the groove of the second connector. However, Hwang teaches an abutment surface (adjacent 2) of the first connector (101) and the groove (9a) of the second connector (102) (figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to compare the distance from the different length types of latching fingers of Jones when the two connectors are inserted and locked together at the groove as taught

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by Hwang for having three different engaging points of the locking fingers at the groove of the second connector.

Claims 17 and 18 are rejected for the same reason of claims 2 and 3.

In regarding to claim 19, Jones further discloses the third type (of 29) is a third distance from an annular surface (of 23) to an engaging end surface (of mating edge 20) of the connector (18) (figure 2), Jones lacks an abutment surface of the first connector and the groove of the second connector. However, Hwang teaches an abutment surface (adjacent 2) of the first connector (101) and the groove (9a) of the second connector (102) (figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to compare the distance from the different length types of latching fingers of Jones when the two connectors are inserted and locked together at the groove as taught by Hwang for having a third different engaging point of the locking fingers at the groove of the second connector.

Claims 20, 21, 22, 23 and 24 are rejected for the same reason of claims 5, 6, 7, 8 and 9, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PCN

June 25, 2004


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